

REMARKS

Claim Rejections - 35 U.S.C. § 103

The Examiner has rejected claims 1-5, 7, 12-14, and 26-29 under 35 USC 103(a) as being unpatentable over Farkas et al. (U.S. Patent No. 5,773,364), Farkas (Oxidation and Etching of Tungsten in CMP Slurries), Kaufman et al. (U.S. Patent No. 5,954,997) and Brusic et al. (Electrochemical Approach to Au and Cu CMP Process Development). The Applicant respectfully traverses. The cited references fail to anticipate or render obvious, either individually or in combination, all elements of the Applicant's claims. In particular, the element of independent claims 1 and 26 of "an oxidizer comprising a complex double salt of cerium" is not taught by any of the cited references. In contrast, Farkas '364 teaches the mono-basic (single) salt of ammonium cerium nitrate ($\text{NH}_4\text{Ce}(\text{NO}_3)_6$) and the Farkas article "Oxidation an Etching of Tungsten in CMP Slurries" teaches cerium nitrate complexed with nitric acid ($\text{Ce}(\text{NO}_3)/\text{HNO}_3$). Additionally, neither the single salt of ammonium cerium nitrate of Farkas '364 or the cerium nitrate complexed with nitric acid of the Farkas article could be substituted as the complex double salt of cerium claimed by the Applicant because neither would be stable in the slurry formulation in the claimed pH range of between 1.5 and 3.0. Above a pH of one, both the single salt of ammonium cerium nitrate and the cerium nitrate complexed with nitric acid would precipitate out of solution and fail to oxidize the surface of the metal being polished. The complex double salt of cerium claimed by the Applicant remains stable within the pH range of 1.5 and 3.0 and may perform its function of oxidizing the surface of the metal being polished. Additionally, both Kaufman and Brusic fail to teach an oxidizer comprising a complex double salt.


Therefore, the Applicant respectfully submits that the independent claims 1 and 26 and the dependent claims 2-5, 7 and 27-29 that incorporate the elements of claims 1 and 26, respectively, do not anticipate or render obvious the Applicant's claimed invention, either individually or in combination.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 11/12, 2003


Heather M. Molleur
Reg. No. 50,432

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, CA 90025-1026
(408) 720-8300